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Birth Characteristics for Asian or Pacific Islander Subgroups, 1992

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Introduction

This report marks the first National Center for Health Statistics (NCHS) publication on Asian or Pacific Islander births of Asian Indian, Korean, Vietnamese, Guamanian, and Samoan origin. The demographic and health characteristics of these births, as derived from birth certificates for a seven-State reporting area, are described and compared with those of other Asian or Pacific Islander subgroups and with other selected racial or national origin groups.

Asian or Pacific Islander (API) births of Chinese, Japanese, Filipino, or Hawaiian descent have been separately identified in vital statistics data for many years. All other births of API origin were included in the category ''Other Asian or Pacific Islander'' (Other API). The interest and feasibility of further subdividing the ''Other API'' category has risen along with the number of births in this category that increased nearly 3-fold between 1978 and 1992, from 22,702 to 81,249 births.

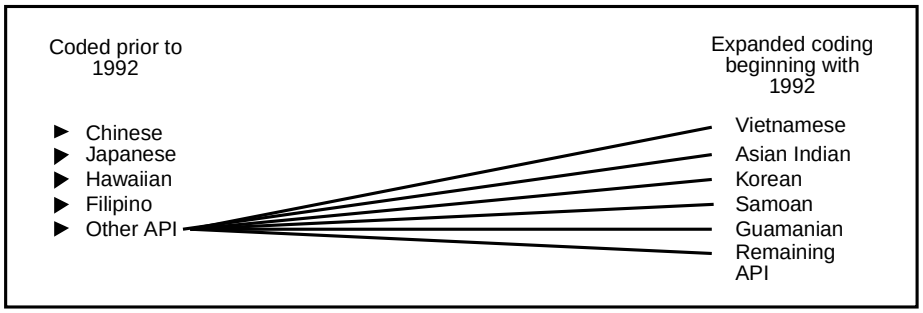

Figure 1. Asian or Pacific Islander subgroups

Data are now available to identify births for three subgroups that comprise most of the ''Other API'' category (Asian Indian, Korean, and Vietnamese) as well as births of Guamanian and Samoan origin. API births not separately identified as Chinese, Japanese, Hawaiian, Filipino, Asian Indian, Korean, Vietnamese, Guamanian, or Samoan are tabulated as ''Remaining API (figure 1). Based on the 1990 Census of Population the ''Remaining API'' category is assumed to be comprised primarily of births of Cambodian, Laotian, Thai, Hmong, and Pakistani descent (1).

NCHS contracted with the seven States with the highest API populations (1) to code births to these additional API subgroups. The seven States are: California, Hawaii, Illinois, New Jersey, New York, Texas, and Washington. At least two-thirds of the U.S. population of each of these additional API groups lived in the seven-State reporting area: Asian Indian, Korean, and Vietnamese, 62–66 percent; Guamanian, 74 percent; and Samoan, 84 percent (1).

The additional API subgroups for which NCHS can now provide data separately include a heterogeneous popula-

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tion, some who are new immigrants who have left their countries voluntarily, some who have left as refugees under desperate circumstances, and some who are second or later generation nationals. The economic and linguistic circumstances of the groups also are often dissimilar. For example, the proportion of Vietnamese families reporting incomes below the poverty level for 1989 was three times as high as that for Asian Indian families (24 percent compared with 7 percent) and 42 percent of the Vietnamese population 5 years of age and older was in a linguistically isolated household compared with only 7 percent of the Samoan population (2,3). (A linguistically isolated household is one in which no person age 14 years or older speaks only English and no person age 14 years or over who speaks a language other than English speaks English ''Very well.''(3)) The linguistic, cultural, and socioeconomic diversity of these subgroups suggest that there may be differences in pregnancy risk factors and outcomes, but until now, the lack of specific subgroup data have made these differences difficult to identify.

It is likely that the API subpopulations for the seven-State area are representative of national API populations. This is suggested by an analysis of birth statistics reported for API groups that were separately identified for the entire United States for 1992 compared with data for those groups reported for the seven-State area. For example, the proportions of low birthweight reported for the United States for Chinese and Japanese births were 5.0 and 7.0 percent (4), the same as for the seven-State area. However, it is important to note that the proportion of the Chinese and Japanese populations residing in the seven-State area (77 and 81 percent) (1) is higher than that for most of the newly separately identified subgroups. Additionally, the seven-State reporting area accounts for a much smaller proportion of the white non-Hispanic and black populations (31 and 33 percent) (1). Nonetheless, birth statistics presented in this report for the latter two groups reasonably correspond to those reported nationally, and the relative standings of the groups vis-a-vis the API subgroups are rarely, if ever, affected. However, since national data are available for white non-Hispanic and black births, data presented here should not be used outside of this context.

Interpretation of the differences in birth characteristics among groups should take into account differences in the age distributions of the populations. For example, according to the 1990 Census, 20 percent of Vietnamese females of childbearing age were 15–19 years of age, compared with only 11 percent of Japanese females (3). Thus, some or all of the disparity observed between the proportions of Vietnamese and Japanese births that are to teenaged mothers may be accounted for by differences in the teen populations of these groups. Such differences in age composition affect distributions of births by other characteristics, such as live-birth order and maternal educational attainment. Unfortunately, population data for specific API subgroups were not available for 1992 and, consequently, it was not possible to calculate population-based rates.

Births are tabulated by the race of the mother (see Technical notes). For ease of discussion, the terms Asian or Pacific Islander births and Asian or Pacific Islander mothers, or Chinese births and Chinese mothers, and so forth, are used interchangeably. These data can be used to monitor maternal and infant health and to identify groups at greatest risk for poor pregnancy outcome. Differences by race in risk factors during pregnancy and birth outcomes may reflect differences in factors such as socioeconomic status, and access to medical care.

Selected demographic characteristics

Births by State of residence

Asian or Pacific Islander births were highly concentrated in the reporting area. The seven States accounted for

Table 1. Live births by race or national origin of mother: Each reporting State, 1992

Race of mother	Total of 7 States	State						
		California	Hawaii	Illinois	New Jersey	New York	Texas	Washington
All races	1,621,081	601,730	19,864	191,396	119,909	287,887	320,845	79,450
Total, Asian or Pacific Islander[1]	108,295	59,519	13,258	5,367	5,384	13,252	6,953	4,562
Asian:								
Chinese	19,497	11,673	737	654	889	4,087	1,032	425
Japanese	7,383	3,497	2,421	260	269	487	175	274
Filipino	24,482	15,669	3,700	955	1,068	1,376	801	913
Vietnamese	10,870	7,410	179	252	181	370	1,817	661
Asian Indian	9,173	3,375	10	1,255	1,442	2,075	866	150
Korean	8,772	4,449	422	527	576	1,512	748	538
Pacific Islander:								
Hawaiian	5,517	562	4,730	14	6	6	58	141
Samoan	1,700	983	558	3	3	–	20	133
Guamanian	574	390	47	5	8	29	25	70
Remaining Asian or Pacific Islander:								
Total	20,189	11,492	454	1,418	904	3,287	1,408	1,226
White[2]	1,284,748	492,487	5,738	142,842	90,823	212,579	270,198	70,081
Hispanic	488,399	261,656	651	26,915	16,169	49,938	126,058	7,012
Non-Hispanic	783,022	228,252	5,084	115,760	74,348	154,439	143,915	61,224
Black	220,674	46,509	685	42,923	23,406	60,990	43,016	3,145
American Indian[3]	7,364	3,215	183	264	296	1,066	678	1,662

[1]Includes births to ''Other API'' mothers who are residents of the 7-State reporting area but which occurred outside of the reporting area. This includes Vietnamese, Asian Indian, Korean, Samoan, and Guamanian mothers. These births are not included in the ''Remaining API'' category.
[2]Includes origin not stated.
[3]Includes births to Aleuts and Eskimos.

72 percent of all API births with no other single State accounting for more than 3 percent of all API births. For each of the API subgroups except Hawaiian, the majority of births were to residents of California.

Two of the newly coded API subgroups comprised the majority of API births in three of the reporting States. Asian Indian births predominated in Illinois and New Jersey, and Vietnamese births predominated in Texas. Among the other API subgroups, births of Filipino origin comprised the largest proportion of API births in California and Washington, and Chinese births predominated in New York (table 1).

White Hispanic births (henceforth referred to as ''Hispanic'') were slightly more concentrated in the reporting area (78 percent) than API births, but those for other racial and national origin groups were more widely distributed throughout the country. The seven-State reporting area accounted for only about one-third of all white non-Hispanic and black births.

Place of birth of mother

Between 1980 and 1991, the API population more than doubled, (5) representing the fastest growing minority group in the United States (6). The population of API women in their childbearing years (15–44 years of age) increased at an equivalent pace, rising by a total of 112 percent over this period (5). Most of the growth in the API population was the result of immigration (5), and accordingly, only 17 percent of API mothers giving birth in 1992 were born in the 50 States and the District of Columbia (table 2). Nonetheless, the proportion of mothers born elsewhere varied widely among the individual API subgroups. Almost all Vietnamese, Asian Indian, or Korean mothers (97–99 percent) were born elsewhere, as were the vast majority of Chinese mothers (90 percent). Comparatively, less than half of all Japanese mothers (45 percent), and almost no Hawaiian mothers (2 percent) were born elsewhere. Older mothers were more likely not to be born in the 50 States and the District of Columbia than younger mothers for each of the API groups.

Of the non-API racial or national origin groups, Hispanic mothers were the most likely to be born outside of the 50 States and the District of Columbia (65 percent) compared with 7 percent of white non-Hispanic, and 14 percent of black mothers.

Age of mother

Differences among the subgroups in the age distributions of mothers giving birth suggests the marked heterogeneity of the groups included within the category ''Asian or Pacific Islander.'' Teenage childbearing (under 20 years of age) is associated with high fertility; thus, groups beginning childbearing early generally have higher fertility levels than those who begin later (7). Among the API subgroups, levels of teen childbearing ranged from less than 1 percent of all births for Chinese mothers to 19 percent for Hawaiian mothers (tables 3 and 4). Births to younger mothers were relatively common among Guamanian (17 percent) and Samoan mothers (11 percent) but substantially less so among Asian Indian (2 percent) and Korean mothers (1 percent). Comparatively, 7 percent of white non-Hispanic and 20 percent of black births in the reporting area were to mothers under 20 years of age.

Among Asian or Pacific Islanders, births to older mothers (at least 30 years of age) occurred most frequently among Japanese and Chinese women. Almost two-thirds (65–61 percent) of Japanese and Chinese births were to older mothers. Older childbearing also was fairly common among Asian Indian, Viet-

Table 2. Percent of births to mothers born outside of the 50 States and the District of Columbia by age and race or national origin of mother: Total of 7 reporting States, 1992

Race of mother	All ages	Age of mother									
		Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–49 years
			Total	15–17 years	18–19 years					
All races	30.7	19.8	24.9	21.7	26.8	32.2	32.2	29.2	31.6	37.3
Total, Asian or Pacific Islander[1]	82.9	73.9	59.3	56.5	60.8	78.1	86.3	85.0	85.1	87.3
Asian:										
Chinese	90.4	*	60.8	57.1	62.4	90.6	93.7	90.0	88.0	83.1
Japanese	45.3	*	14.0	*	18.3	37.0	53.1	45.4	42.5	48.0
Filipino	84.9	*	48.9	40.4	53.4	76.3	85.6	90.3	94.2	96.2
Vietnamese	99.3	*	97.3	92.8	98.8	99.0	99.6	99.5	99.5	99.5
Asian Indian	97.2	*	80.5	68.8	84.4	95.8	97.8	98.2	97.1	95.7
Korean	97.4	*	70.0	64.3	72.0	94.5	98.4	98.0	98.0	93.6
Pacific Islander:										
Hawaiian	2.0	*	*	*	*	1.6	2.1	2.5	*	*
Samoan	66.0	*	42.5	44.2	41.9	56.9	69.1	82.1	86.6	100.0
Guamanian	73.0	*	60.6	56.1	64.2	74.2	77.1	70.0	90.0	*
Remaining Asian or Pacific Islander:										
Total	89.2	100.0	88.5	89.1	88.0	92.1	91.5	85.1	85.4	91.4
White[2]	29.2	27.8	29.8	27.0	31.5	34.4	29.6	24.1	25.8	31.5
Hispanic	64.9	36.3	49.0	41.6	53.8	64.2	69.8	70.3	73.8	79.1
Non-Hispanic	7.1	*	3.4	2.7	3.8	6.0	7.5	7.7	8.7	10.9
Black	14.0	2.8	4.8	3.6	5.6	9.2	17.4	22.6	26.1	27.5
American Indian[3]	14.0	*	4.0	*	4.4	9.6	18.2	21.4	21.1	23.0

[1]Includes births to ''Other API'' mothers who are residents of the 7-State reporting area but which occurred outside of the reporting area. This includes Vietnamese, Asian Indian, Korean, Samoan, and Guamanian mothers. These births are not included in the ''Remaining API'' category.
[2]Includes origin not stated.
[3]Includes Aleuts and Eskimos.

Table 3. Number and percent distribution of births by age of mother according to race or national origin of mother: Total of 7 reporting States, 1992

Race of mother	All ages	Age of mother									
		Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
			Total	15–17 years	18–19 years						
	Number										
All races	1,621,081	4,560	188,071	71,231	116,840	406,043	467,185	373,958	153,569	26,656	1,039
Total, Asian or Pacific Islander[1]	108,295	162	5,781	2,009	3,772	18,841	33,309	32,002	15,098	2,939	163
Asian:											
Chinese	19,497	–	144	42	102	1,426	6,122	7,648	3,561	575	21
Japanese	7,383	1	194	63	131	581	1,819	2,964	1,555	266	3
Filipino	24,482	17	1,353	461	892	4,474	6,959	6,816	4,046	795	22
Vietnamese	10,870	6	639	153	486	2,582	3,060	2,646	1,500	416	21
Asian Indian	9,173	3	135	36	99	1,599	3,821	2,648	849	113	5
Korean	8,772	–	110	28	82	883	3,499	3,222	933	122	3
Pacific Islander:											
Hawaiian	5,517	26	1,009	365	644	1,788	1,497	844	305	47	1
Samoan	1,700	1	181	52	129	555	544	285	112	21	1
Guamanian	574	5	94	41	53	186	157	94	30	7	1
Remaining Asian or Pacific Islander:											
Total	20,189	103	1,914	765	1,149	4,752	5,781	4,796	2,182	576	85
White[2]	1,284,748	2,648	138,273	50,526	87,747	318,467	377,249	303,314	122,895	21,102	800
Hispanic	488,399	1,986	79,953	31,448	48,505	154,982	133,487	79,362	32,080	6,275	274
Non-Hispanic	783,022	649	57,590	18,829	38,761	161,055	240,097	220,016	88,776	14,336	503
Black	220,674	1,723	42,770	18,200	24,570	66,510	54,617	37,354	15,097	2,529	74
American Indian[3]	7,364	27	1,247	496	751	2,225	2,010	1,288	479	86	2
	Percent distribution										
All races	100.0	0.3	11.6	4.4	7.2	25.1	28.8	23.1	9.5	1.6	0.1
Total, Asian or Pacific Islander[1]	100.0	0.2	5.3	1.9	3.5	17.4	30.8	29.6	13.9	2.7	0.2
Asian:											
Chinese	100.0	–	0.7	0.2	0.5	7.3	31.4	39.2	18.3	3.0	0.1
Japanese	100.0	*	2.6	0.9	1.8	7.9	24.6	40.2	21.1	3.6	*
Filipino	100.0	*	5.5	1.9	3.6	18.3	28.4	27.8	16.5	3.3	0.1
Vietnamese	100.0	*	5.9	1.4	4.5	23.8	28.2	24.3	13.8	3.8	0.2
Asian Indian	100.0	*	1.5	0.4	1.1	17.4	41.7	28.9	9.3	1.2	*
Korean	100.0	*	1.3	0.3	0.9	10.1	39.9	36.7	10.6	1.4	*
Pacific Islander:											
Hawaiian	100.0	0.5	18.3	6.6	11.7	32.4	27.1	15.3	5.5	0.9	*
Samoan	100.0	*	10.7	3.1	7.6	32.7	32.0	16.8	6.6	1.2	*
Guamanian	100.0	*	16.4	7.1	9.2	32.4	27.4	16.4	5.2	*	*
Remaining Asian or Pacific Islander:											
Total	100.0	0.5	9.5	3.8	5.7	23.5	28.6	23.8	10.8	2.9	0.4
White[2]	100.0	0.2	10.8	3.9	6.8	24.8	29.4	23.6	9.6	1.6	0.1
Hispanic	100.0	0.4	16.4	6.4	9.9	31.7	27.3	16.3	6.6	1.3	0.1
Non-Hispanic	100.0	0.1	7.4	2.4	5.0	20.6	30.7	28.1	11.3	1.8	0.1
Black	100.0	0.8	19.4	8.3	11.1	30.1	24.8	16.9	6.8	1.2	0.0
American Indian[3]	100.0	0.4	16.9	6.7	10.2	30.2	27.3	17.5	6.5	1.2	*

[1]Includes births to "Other API" mothers who are residents of the 7-State reporting area but which occurred outside of the reporting area. This includes Vietnamese, Asian Indian, Korean, Samoan, and Guamanian mothers. These births are not included in the "Remaining API" category.
[2]Includes origin not stated.
[3]Includes Aleuts and Eskimos.

namese, and Korean women (39–49 percent). Guamanian, Hawaiian, and Samoan women were the least likely to give birth at an older age—only about one of every four (22–25 percent) of these births occurred to mothers 30 years of age and older. In comparison, 41 percent of white non-Hispanic and 25 percent of black births were to older mothers.

As a group, API mothers born in the 50 States and the District of Columbia were three times as likely to have a teenage birth as were mothers born elsewhere (13 percent of births compared with 4 percent). Levels of teenage childbearing were substantially higher for each API subgroup except the "Remaining API" women for whom levels were essentially the same.

The tendency for teen childbearing to be higher among mothers born in the 50 States and the District of Columbia was observed among other racial/ethnic groups. Teen births were 2–3 times as prevalent among white non-Hispanic, Hispanic, and black women born in the 50 States and the District of Columbia as among those born elsewhere.

Live-birth order

A comparison of the fertility of the different racial or national origin groups can be made by analyzing the distributions of births by live-birth order. Among API subgroups, the proportions of fourth- and higher order births was highest (24–27 percent) for Samoan and the "Remaining API" mothers. Moderately

Table 4. Percent of births with selected demographic characteristics by place of birth and race or national origin of mother: Total of 7 reporting States, 1992

Race of mother	Births to mothers under 20 years of age			Fourth and higher order births			Births to unmarried mothers			Mothers with 12 years or more education[2]		
	Total	U.S. born[1]	Born elsewhere	Total	U.S. born[1]	Born elsewhere	Total	U.S. born[1]	Born elsewhere	Total	U.S. born[1]	Born elsewhere
All races	11.9	12.9	9.6	11.8	10.3	15.0	29.8	29.2	31.1	77.2	87.8	54.2
Total, Asian or Pacific Islander[3]	5.5	12.9	4.0	10.0	8.6	10.3	14.8	30.4	11.5	84.2	94.0	82.3
Asian:												
Chinese	0.7	3.0	0.5	2.9	2.7	2.9	5.6	12.8	4.8	85.0	98.6	83.6
Japanese	2.6	4.1	0.8	3.5	4.1	2.8	10.5	14.4	5.8	98.7	98.7	98.8
Filipino	5.6	19.0	3.2	7.0	7.8	6.8	17.6	37.1	14.1	93.7	93.0	93.8
Vietnamese	5.9	*	5.8	14.1	*	14.2	19.3	31.2	19.2	65.8	82.9	65.7
Asian Indian	1.5	10.2	1.2	3.5	8.7	3.3	8.1	26.4	7.3	92.1	90.0	92.3
Korean	1.3	14.4	0.9	2.2	*	2.1	4.2	27.4	3.6	95.8	95.1	95.8
Pacific Islander:												
Hawaiian	18.8	18.9	*	15.3	15.3	*	46.5	46.7	32.1	89.8	89.7	93.6
Samoan	10.7	18.2	6.9	26.5	15.3	32.3	36.4	42.4	33.3	86.1	83.4	87.4
Guamanian	17.3	24.7	14.7	16.6	*	17.3	34.5	39.0	33.2	86.4	88.5	85.6
Remaining Asian or Pacific Islander:												
Total	10.0	10.1	10.0	24.4	5.0	26.6	15.9	20.4	15.3	63.7	95.0	59.8
White[4]	11.0	10.9	11.2	11.1	9.0	16.2	25.1	21.1	34.6	75.9	88.8	44.6
Hispanic	16.8	24.6	12.6	15.7	12.8	17.3	38.3	37.6	38.7	47.5	71.2	36.3
Non-Hispanic	7.4	7.7	3.6	8.2	8.1	10.0	16.9	17.3	11.9	92.0	92.2	89.1
Black	20.2	22.3	6.8	16.4	16.8	13.9	64.3	67.0	47.0	81.9	82.1	81.2
American Indian[5]	17.3	19.3	4.9	17.0	18.3	8.6	46.0	49.8	22.7	76.3	75.3	81.4

[1]Born in the 50 States and the District of Columbia.
[2]Includes births to women 20 years of age and older only.
[3]Includes births to "Other API" mothers who are residents of the 7-State reporting area but which occurred outside of the reporting area. This includes Vietnamese, Asian Indian, Korean, Samoan, and Guamanian mothers. These births are not included in the "Remaining API" category.
[4]Includes origin not stated.
[5]Includes Aleuts and Eskimos.

high levels (14–17 percent) were observed for Vietnamese, Hawaiian, and Guamanian mothers (table 4). These levels, combined with relatively low levels of first births (not shown), suggest high fertility and large families. On the other hand, higher order proportions were very low (2–4 percent) for Korean, Chinese, Japanese, and Asian Indian mothers, even lower than that for Filipino (7 percent) mothers. Recently published birth and fertility rates for the previously separately identified Asian or Pacific Islander subgroups confirm these findings (8). By contrast, the proportion of higher-order births was 8 percent for white non-Hispanic mothers and 16 percent for Hispanic mothers.

Thirty-one to 54 percent of Korean, Filipino, Chinese, and Japanese first births were to mothers 30 years and older. (Data not shown.) These high levels of delayed childbearing are consistent with the greater educational attainment of these mothers and suggest postponement of childbearing in order to complete schooling. (See section on education.) In fact, overall, API mothers 30–39 years of age having a first birth were better educated than mothers of the same age having a second or higher-order birth—54 compared with 39 percent were college educated.

Despite their much larger proportion of births to teenaged mothers, suggesting higher fertility, API mothers born in the 50 States and the District of Columbia were slightly less likely to have a higher-order birth than mothers born elsewhere (9 compared with 10 percent), but this pattern varied by API subgroup. While the incidence of higher order births was substantially lower for Samoan and the "Remaining API" women born in the 50 States and the District of Columbia than among those born elsewhere, the proportion of fourth- and higher order births was higher for U.S.-born Japanese, Filipino, and Asian Indian mothers than for mothers born elsewhere.

Births to unmarried women

A broad range of levels of unmarried childbearing was observed among the Asian or Pacific Islander subgroups. The lowest proportion of out-of-wedlock births was for Korean women (4 percent) and the highest for Hawaiian women (47 percent), more than a 10-fold difference (table 4). Unmarried childbearing was also comparatively uncommon among Chinese and Asian Indian women (6–8 percent), but more than one-third of Samoan (36 percent) and Guamanian (35 percent) births were to unmarried mothers. In comparison, the proportions of unmarried childbearing for white non-Hispanic and black women were 17 and 64 percent.

Unmarried childbearing occurs more frequently among younger mothers; thus, the older age at childbearing of API mothers overall and for some of the specific groups contributes to their lower proportions of unmarried mothers. However, at each age group, API mothers were less likely than white or black mothers to bear an out-of-wedlock child.

As a group, Asian or Pacific Islander mothers born in the 50 States and the District of Columbia were almost three times as likely to be unmarried as were API mothers born elsewhere. For each of the subgroups, out-of-wedlock births also occurred more frequently among women born in the 50 States and the District of Columbia.

Education

Education is a commonly used indicator of socioeconomic status and is

the only such indicator currently available from birth certificate data. Data described here do not include births to women under 20 years of age who may not have had the opportunity to complete their education, and thus differences in educational attainment across subgroups cannot be explained by variation in levels of teen childbearing.

Among the API subgroups, high school completion ranged from essentially all Japanese mothers (99 percent) to 64–66 percent of ''Remaining API'' and Vietnamese mothers (table 4). Filipino, Asian Indian, and Korean mothers also reported high school completion rates of greater than 90 percent.

Levels of higher education (at least 16 years of schooling) also varied widely by subgroup. Nearly half of Chinese, Japanese, Korean, and Asian Indian mothers had a college education—levels that are consistent with their delayed childbearing. Comparatively, only about 1 of 7 Vietnamese and less than 1 of 10 Samoan and Guamanian mothers reported 16 years or more of schooling (data not shown).

High school and college completion levels were higher for several of the API subgroups compared with white non-Hispanic mothers. Chinese, Japanese, Filipino, Asian Indian, and Korean mothers were 24–58 percent more likely to be college educated than white non-Hispanic mothers (data not shown).

Educational differences among the API subgroups were evident for mothers not born in the 50 States and the District of Columbia and suggest the disparate socioeconomic statuses of the immigrant mothers. For example, 96 percent Korean mothers not born in the 50 States and the District of Columbia were high school graduates compared with only 66 percent of Vietnamese mothers born elsewhere.

Overall, API mothers born in the 50 States and the District of Columbia were better educated than API mothers born elsewhere, but for most subgroups the proportions of mothers who had completed high school were quite similar. Only Vietnamese and the ''Remaining API'' mothers born in the 50 States and the District of Columbia were substantially better educated than their counterparts born elsewhere.

Health characteristics

Prenatal care

Early initiation of prenatal care is considered important to positive pregnancy outcome. Overall, slightly more than three-fourths of all API mothers began prenatal care during the first trimester of pregnancy, but the range of timely care varied markedly among the subgroups. The most advantageous level of early care initiation was noted for Japanese mothers (89 percent) and the least for Samoan mothers (48 percent) (table 5). Despite marked variation in the proportions of younger and older mothers beginning care early for all API subgroups (for example, for Chinese mothers the level was twice as high for mothers 30 years and older than for mothers under 20 years of age), the different age distributions of the subgroups do not explain all of the disparity among subgroups in prenatal care receipt. API subgroups with higher overall levels tended to have higher levels across age groups (data not shown). For instance, the percent of Japanese mothers who began care in the first trimester was higher than that of any

Table 5. Percent of births with selected health characteristics by place of birth and race or national origin of mother: Total of 7 reporting States, 1992

Race of mother	1st trimester prenatal care[1]			Cesarean delivery			Preterm[3]			Low birthweight[4]		
	Total	U.S. born[2]	Born elsewhere	Total	U.S. born[2]	Born elsewhere	Total	U.S. born[2]	Born elsewhere	Total	U.S. born[2]	Born elsewhere
All races	75.1	79.1	66.0	22.8	23.8	20.5	10.4	10.6	10.0	6.7	7.1	5.8
Total, Asian or Pacific Islander[5]	77.2	79.2	76.9	20.4	19.0	20.7	9.6	10.0	9.6	6.6	7.1	6.5
Asian:												
Chinese	84.2	89.8	83.6	21.2	17.7	21.5	6.8	7.2	6.8	5.0	6.2	4.9
Japanese	88.6	89.9	87.2	20.1	21.5	18.4	8.1	9.2	6.7	7.1	7.5	6.6
Filipino	78.8	76.6	79.2	24.5	17.7	25.7	10.8	10.7	10.8	7.6	8.3	7.4
Vietnamese	78.5	66.7	78.6	16.6	15.8	16.6	10.4	*	10.5	5.5	*	5.5
Asian Indian	80.0	78.5	80.1	22.9	21.0	23.0	9.6	10.4	9.6	9.6	*	9.6
Korean	76.7	78.5	76.7	23.0	21.9	23.0	6.0	*	6.0	4.2	*	4.2
Pacific Islander:												
Hawaiian	69.9	70.0	67.3	17.9	18.0	*	11.4	11.3	13.0	6.9	7.0	*
Samoan	48.4	53.5	45.7	16.8	15.3	17.6	12.7	10.8	13.6	4.5	4.3	4.6
Guamanian	66.4	70.3	65.7	19.4	17.7	19.5	11.7	*	12.0	7.5	*	7.0
Remaining Asian or Pacific Islander:												
Total	67.2	84.0	65.1	15.6	20.7	14.9	11.9	9.6	12.2	7.0	6.7	7.1
White[6]	76.9	82.4	63.6	23.0	24.1	20.2	9.2	9.0	9.8	5.6	5.7	5.3
Hispanic	63.4	68.5	60.6	21.4	24.2	20.0	10.7	11.6	10.1	5.9	6.9	5.3
Non-Hispanic	85.2	85.6	80.5	24.0	24.2	21.6	8.4	8.4	8.2	5.4	5.4	5.3
Black	63.5	63.6	64.0	22.8	22.6	24.2	17.7	18.3	13.4	13.3	13.9	9.1
American Indian[7]	67.7	67.5	69.6	21.3	21.1	22.6	11.2	10.9	12.8	6.7	6.4	8.9

[1]Care beginning in the first 3 months of pregnancy.
[2]Born in the 50 States and the District of Columbia.
[3]Prior to 37 completed weeks of gestation.
[4]Birthweight of less than 2,500 grams.
[5]Includes births to ''Other API'' mothers who are residents of the 7-State reporting area but which occurred outside of the reporting area. This includes Vietnamese, Asian Indian, Korean, Samoan, and Guamanian mothers. These births are not included in the ''Remaining API'' category.
[6]Includes origin not stated.
[7]Includes Aleuts and Eskimos.

other subgroup overall, and at each 5-year age group. Similarly, the analogous Samoan overall and age-specific proportions were lower than those of any other subgroup.

In spite of possible linguistic and cultural barriers to care (9), Korean, Vietnamese, and Asian Indian women (77–80 percent) were nearly as likely as white non-Hispanic women (85 percent) to initiate care during the first 3 months of pregnancy.

Overall, API women born in the 50 States and the District of Columbia were only slightly more likely to have begun care during the first 3 months of pregnancy (79 compared with 77 percent). However, for three subgroups (Filipino, Asian Indian, and Vietnamese) this pattern was reversed. U.S.-born Vietnamese women were particularly less likely than Vietnamese mothers born elsewhere to begin care in the first trimester.

Cesarean delivery

The risk of cesarean delivery increases with advancing age of the mother (10). Therefore, differences in cesarean delivery rates (number of cesareans per 100 births) among the API subgroups are to be expected, given the large variation in older childbearing among the groups. Cesarean rates among API subgroups ranged widely from levels close to the year 2000 goal of 15.0 percent (11) (15.6 for the ''Remaining API,'' 16.6 for Vietnamese, and 16.8 for Samoan mothers) to 24.5 percent for Filipino mothers (table 5). However, this large variation in cesarean rates cannot be wholly attributed to differences in age distributions. For example, cesarean rates for ''Remaining API,'' Vietnamese, and Samoan mothers were lower than those of Asian Indian (22.9) and Korean mothers (23.0) across all age groups. Thus, the overall lower rates for these groups cannot be solely attributed to their smaller proportions of births to older mothers.

Another factor associated with the higher cesarean rates of Korean, Asian Indian, and Filipino mothers is their higher educational levels. Educational attainment has been positively associated with cesarean delivery rates independent of age (10). Differences in educational levels also may help to account for the 31–35 percent lower cesarean rates of Vietnamese and ''Remaining API'' mothers compared with white non-Hispanic mothers (24.0), despite their similar proportions of births to mothers 30 years and over.

Likely due in part to their older age, API mothers not born in the 50 States and the District of Columbia were slightly more likely to have a cesarean delivery (20.7 compared with 19.0 percent). Only Japanese and the ''Remaining API'' mothers born in the 50 States and the District of Columbia were more likely than mothers born elsewhere to undergo a cesarean delivery.

Preterm births

Infants born preterm (before 37 completed weeks of gestation) are at increased risk of poor pregnancy outcome and comprise a large proportion of infant mortality (12). Among API births, Korean babies were at the least risk of preterm birth (6.0 percent), a risk less than one-half that found for Samoan births (12.7 percent) (table 5). Preterm births were more prevalent among Asian Indian (9.6 percent) and Vietnamese (10.4 percent) than among Korean births, but the highest levels were observed among Guamanian, ''Remaining API,'' and Samoan births (11.7–12.7 percent).

The Korean preterm rate of 6 percent was lower than that of any other racial or ethnic group under study and compares very favorably with that for white non-Hispanic mothers (8.4 percent), the lowest level observed among the non-API racial or national origin groups.

There was essentially no difference in preterm rates for API mothers born in the 50 States and the District of Columbia compared with those born elsewhere (10.0 compared with 9.6 percent). However, short gestation periods were more common among Samoan and ''Remaining API'' mothers not born in the 50 States and the District of Columbia.

Low birthweight

Newborns weighing less than 2,500 grams (5 1/2 pounds) are considered to be of low birthweight and are at greater risk of morbidity and mortality than are infants of higher birthweights (12). The extent of low birthweight (less than 2,500 grams) among specific API subgroups varied substantially, ranging from 4.2 and 4.5 percent for Korean and Samoan births to 9.6 percent for Asian Indian births (table 5). Comparatively, 5.4 percent of white non-Hispanic and 13.3 percent of black infants weighed less than 2,500 grams.

Low birthweight has been associated with inadequate prenatal care, shorter gestation periods, and demographic factors such as teenage and out-of-wedlock childbearing. Thus, the favorable low birthweight level for Korean births was expected, given the lack of risk factors among Korean mothers, but the comparatively high proportion low birthweight for Asian Indian births, whose risk profile is similar to that of Korean mothers, is more difficult to explain. Relatively high levels of low birthweight were found even among Asian Indian mothers who were college graduates (9.2 percent) (data not shown). The proportion very low birthweight (less than 1,500 grams) was also higher for Asian Indian mothers than for any other racial group except black (data not shown).

It has been noted elsewhere that low birthweight for several immigrant groups, including API's, tends to be higher for births to mothers born in the 50 States and the District of Columbia than to mothers born elsewhere (13,14); the data in this report for API mothers, overall, show the same pattern (7.1 compared with 6.5 percent). Chinese, Japanese, and Filipino low birthweight levels showed a similar pattern, but there were too few births among the other API subgroups to determine if this relationship holds.

Summary

Asian or Pacific Islanders have been perceived as a high-achieving minority with few problems (9,15). Information now available from birth certificates shows that there is considerable diversity among the API subgroups; by most measures of risk factors of pregnancy and birth outcomes they are as different from each other as they are from other racial or ethnic groups.

Korean women reported the lowest levels of teenage and unmarried childbearing and of higher-order births and

were among the best educated mothers. Birth outcomes of Korean babies, based on preterm birth and low birthweight, were also more favorable than those of any other group. Asian Indian women shared a lack of pregnancy risk with Korean mothers but not their favorable birth outcomes; the percent low birthweight for Asian Indian births was higher than that of any API subgroup. In sharp contrast, Hawaiian, Guamanian, and, to a lesser extent, Samoan women had a high pregnancy risk profile and depressed levels of early prenatal care comparable to those of black and American Indian mothers. But despite the presence of multiple risks, low birthweight levels for these groups were lower or only moderately elevated compared with those for white non-Hispanic mothers.

The findings for Vietnamese women were between these two extremes. Levels of teenage and unmarried childbearing were elevated when compared with Korean and Asian Indian women but were very similar to those of white non-Hispanic mothers. Vietnamese pregnancy outcomes were very favorable—the level of low birthweight was essentially the same as that for white non-Hispanic births.

The wide diversity in birth characteristics found among the API subgroups demonstrates the limited analytic value of the ''Total API'' category. Although not a focus of this report, the API subgroups also may be combined into two larger groups; ''Asian'' which includes persons of Chinese, Japanese, Filipino, Vietnamese, Asian Indian, and Korean origin and ''Pacific Islander'' including those of Hawaiian, Samoan, and Guamanian descent. All tables are organized into these two categories although totals are not presented. Review of birth characteristics by ''Asian'' and ''Pacific Islander'' reveals more commonalities among Asian subgroups and Pacific Islander subgroups than between these two broad racial or ethnic classifications, although within each category a high degree of heterogeneity was apparent. For example, the sociodemographic risk profile for Vietnamese, and to a slightly lesser extent, Filipino mothers, was substantially greater than that for other Asian subgroups but still lower than that for Pacific Islander subgroups.

The finding of wide variation in pregnancy risk factors and birth outcomes for the API subgroups suggests special problems during pregnancy and distinct maternal health care needs. This further underscores the importance of individually characterizing each racial or ethnic subgroup to better meet the unique needs of these populations.

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Technical notes

Source of data

Data shown in this report are based on 100 percent of the birth certificates of residents of seven States—California, Hawaii, Illinois, New Jersey, New York, Texas, and Washington. Data are provided to the National Center for Health Statistics through the Vital Statistics Cooperative Program. Information on selected maternal and infant health characteristics was derived from items on 1992 certificates of live births. Births that occur in other States to residents of these seven States who are members of one of the new subgroups or ''Remaining API'' are included in the ''Total API'' category. ''U.S.-born'' is defined for this report as born within the 50 States and District of Columbia and, thus, women born in Samoa and Guam are classified as not born in the 50 States and the District of Columbia.

Computation of percents and percent distributions

Births with unknown live-birth order, place of birth of mother, educational attainment of mother, month of pregnancy prenatal care began, birthweight, period of gestation, and method of delivery were subtracted from total births before percents and percent distributions were computed. An asterisk is shown in place of any derived statistic based on fewer than 20 births in the numerator or denominator.

Although the birth data in this report are not subject to sampling error, they may be affected by random variation in the number of births involved. When the number of events is small (perhaps less than 100), and the probability of such an event is small, considerable caution must be observed in interpreting the data. More information on this topic is included in the Technical Appendix of *Vital Statistics of the United States*, Volume I, Natality.

Race of mother

Birth data are tabulated by the race of the mother as reported directly on the birth certificate. If race of mother was not stated, it was imputed as that of the father, if known. If neither race was stated, race of mother was imputed as the race of the mother on the preceding record with known race.

Symbols

- - -	Data not available
. . .	Category not applicable
–	Quantity zero
*	Figure does not meet standard of reliability or precision.

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